

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANTS: ASHE, Robert *et al.*  
SERIAL NO. 10/522,974  
FILED: February 1, 2005  
TITLE: REDUCED VOLUME HEAT EXCHANGERS  
EXAMINER: FLANIGAN, Allen, J.  
GROUP NO.: 3744  
CONFIRMATION NO.: 2336  
USPTO CUSTOMER NO.: 27623

Attorney Docket No.: 377.8168USU

**Mail Stop After Final**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**DECLARATION UNDER 37 C.F.R. 1.132**

Dear Sir:

I, Robert Ashe am providing this statement as a declaration in support of the above-referenced patent application, pursuant to 37 CFR § 1.132. I hereby declare and state as follows:

1. I am a citizen of the United Kingdom. I reside at 60 Chineham Close, Fleet, Hampshire in the United Kingdom, Post Code GU51 1BF.
2. I am Director of Ashe Morris Limited and have been since its creation in 2000.
3. I am a co-inventor of U.S. Patent Application Serial No. 10/522,974 filed on February 1, 2005.
4. I am providing the attached photographs for the purpose of showing the difference between a single or half coil reactor similar to those employed in Howry and Kaestner referenced in the Final Rejection and the reduced volume heat exchanger of this Patent Application.

5. I declare that comparison of the two systems illustrated in the attached photographs showed that the single or half coil reactor of Howdry and Kaesner required about 49 litres of temperature control fluid whereas the heat exchanger of this Patent Application required about 8.5 litres for comparable temperature control. I further declare that the response time to changes in reaction temperature was considerably faster when employing the heat exchanger of this Patent Application . .

I hereby declare that all statements made herein of my own knowledge are true and all statements made on information and belief are believed to be true. I further declare that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Respectfully submitted,

By: 

Robert Ashe

Dated: 9<sup>th</sup> June 2010.





